

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

October 11, 2016

Sako Vandermeer
Providence Dairy
19976 476th Avenue
White, SD 57276-5332

Re: Providence Dairy Manure Management System As-Built Plans Review

Dear Mr. Vandermeer:

The Department of Environment and Natural Resources received three copies of the as-built plans for the east half of the south freestall barn and the permeability test results for the completed clay liner beneath this portion of the barn on September 30, 2016. The manure management system is located in the Southwest $\frac{1}{4}$ of Section 23, Township 112 North, Range 49 West in Brookings County, South Dakota.

Your approved manure management system is for a housed lot feeding a maximum of 2,400-head of dairy cattle consisting of 2,100-head of mature dairy cattle and 300 dairy calves with 850-head of mature dairy cattle and 300 dairy calves currently permitted. Your permitted system consists of a flume in two barns, a milk parlor, piping, diversion dikes or channels, a feed storage area, a concrete sand settling lane, a concrete sand stacking pad, a clay-lined sand/manure stacking pad, a manure pack calf barn, two settling ponds, two holding ponds, and 0.66 acres of drainage area. The pond system is designed for at least 365 days of liquid storage capacity.

You also have approved plans for the remaining unpermitted 1,250-head of mature dairy cattle, an additional freestall barn, and a second milk parlor. The department has also approved modifications to holding pond 1 which have not yet been completed.

We approved revised plans and specifications for the south freestall barn on August 8, 2016. The as-built changes consist of the following:

- Water lines enter the south freestall barn along the north side of the barn instead of the south side;
- The pump pit within the north end of the south freestall barn's reception pit will be utilized as a dry well instead of a wet well. A 12-inch steel pipe with valves was installed through the dry well which transitions to a 12-inch PVC pipe and a steel riser with a valve was also installed along the piping in the dry well; and
- Drain ports to the south freestall barn's reception pit were installed at the ends of the scrape alleys within the barn.

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We have reviewed and hereby conditionally approve the changes shown on the as-built plans and accept the permeability test results as meeting the requirements of the permit. Two copies of the as-built plans are being kept for our files. Please replace the appropriate pages in your plans and specifications booklet with the revised pages enclosed with this letter and add any additional pages enclosed with this letter into your plans and specifications booklet. The following requirements must be implemented.

Pump Pit

The as-built plans and specifications do not indicate if the pump installed in the pump pit uses an automatic system or will be manually operated. If the pump will be manually operated, your operation and maintenance guideline must be revised to include the operation of the pump pit. The revised operation and maintenance guideline must be signed and submitted to the department before the department can issue a Certificate of Compliance and permit coverage for the east half of the south freestall barn. **Please have your engineer submit a revised detail indicating the pump pit uses an automatic system or submit a signed, revised operation and maintenance guideline to the department within 30 days of the date of this letter.**

Barn Alley

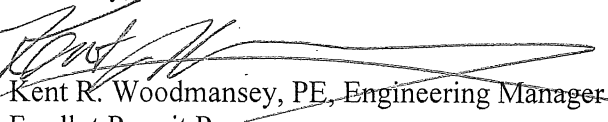
Your engineer indicates the covered alley between the existing barns and new south barn has not yet been constructed. You must ensure cattle are moved between the barns so that manure and wastewater do not leave the manure management system. The department recommends constructing the covered alley between the barns as soon as possible.

Other Government

You are responsible for contacting the local planning and zoning office in the county where manure application will take place to determine if there are any local ordinances or requirements with which you need to comply. It is up to local government to enforce their local ordinances.

If you have any questions regarding the content of this letter, please feel free to contact Ben Myers, Feedlot Permit Program at (605) 773-3351. Thank you for your cooperation.

Sincerely,



Kent R. Woodmansey, PE, Engineering Manager
Feedlot Permit Program

cc: Brian Friedrichsen, PE, DE, Huron, SD
Brookings County Commissioners
Luke Muller, F.D.A.L.G., Watertown, SD

Enclosures